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Ergonomic Quality, Playing a Role in Ensuring Work Life Balance among Malaysian ICT Workers

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Abstract

This paper seeks to address whether the ergonomic quality of technological gadgets, plays role in enhancing work life balance amongst employees in the Malaysian ICT sector. The study will be conducted using a quantitative approach. The findings of this study will be helpful in fostering new tools and technologies that are driven by ISQ dimensions primarily ergonomics quality which can be useful to formulate recommendations to the ICT sector on issues pertaining to sustainable development/policy formulation with reference to WLB. This will empower people in the ICT sector to work remotely, thus addressing issues such as traffic congestion, social-family co-evolution.

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Keywords: ergonomic quality; work life balance; employee performance; employee wellbeing; ICT employees

1. Introduction

The Information and Communication industry in Malaysia is growing each day. Most new companies are embarking on setting up their offices in the Malaysian IT hub. According to the Multimedia Development Corporation (MDeC), as of 2013 there are approximately 3400 registered companies with them. Out of this figure there are approximately 2500 companies which are active. The business services are classified as Information Technology (Info Tech) which constitutes 73%, Shared Services and Outsourcing (SSO) which constitutes 11% and Creative Multimedia and Institution of Higher Learning (IHL) which comprises the balance 26%. The majority of the SSO and

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Info Tech Companies provide a 24/7 operations. A vast number of employees who work in this industry are subjected to working odd hours and shift schedules to meet the demands of a 24/7 operations.

Therefore, long and unsocial hours spent at work (Korunka & Hoonaker, 2014), increased use and dependence on technology and gadgets to enable working from a remote location become an issue of concern. The pervasive and continuous use of Information Systems (IS) and the ergonomic quality of technological gadgets may take a toll on employee wellbeing. Given the critical importance of wellbeing amongst ICT employees in Malaysia (Malaysian Communications and Multimedia Commissions, 2014), there is an indication of a high level of strain and imbalance between work and life commitments. In this context, ease of use, ease of navigation, and comfort ability of the user may play an evident role in ensuring minimal strain and stress. Therefore, this study intends to reveal the relationship between information system quality which includes the ergonomic quality dimension and work life balance. As a result, the effects of information systems quality (ISQ) on work life balance (WLB) may have a significant impact (Korunka & Hoonakker, 2014). There are inadequate studies done in the ICT atmosphere where employment practices vary due to grave reliance on technology as compared to other environments. Even though, the jargon of work life balance (WLB) has only been used in the last 25 years; it has been a factor that has been around much longer (Roberts, 2007). According to Roberts (2007) the concept of multi-tasking and work life balance begun with women who worked multiple roles during the World War 2. This analogy was used to define the concept of WLB to be versatile and can be observed from an alienated perspective of balance between work and life commitments (Roberts, 2007).

Work life balance has constantly been a concern of individual and organizations interested in the superiority of life and its relation to work performance and employee satisfaction. Pressures from work have been intensifying in the recent years. Factors that play an evident role include an increase in working hours, the advances in information technology, peer involvement, complicated family commitments, involvement of women in the workforce, information load, need for speed in response, inconsistent working hours due to globalization (supporting various time zones), increased supervisory support, flexibility in working and many more. Contemporary research on WLB suggests three key areas that raise concern regards to WLB (Guest, 2002; Roberts, 2007; Weinert, 2014; Kim, 2014):

- pressure and intensification of work;
- focus on quality of home and community life;
- attitudes and values of people

Therefore, in order to facilitate remote work, one cannot undermine the role of Information Systems (Shagvaliyeva, 2014) with a particular interest in ergonomics quality. In that note, this study will seek to uncover the role of a well defined and proper information system's effect on employees' work life balance specifically among Malaysian ICT employees who work in the shared service and support environment.

2. Literature Review

The process of a thorough literature search identified that various empirical studies that examined information quality, ergonomic quality and work life balance on its own context rather than collectively. Literatures were reviewed from the early years to show the history of the underlying theories which led to previous findings and narrowed to the latest to show the importance of ISQ and that it lacked examination to show the relevance to work life balance. In this study, Information Systems (IS) refer to the application and devices used by employees from a remote location. Quality as defined by Philip Crosby (1979) is the "conformance to the requirement". In this case, information requirements of the users / employees, thus meeting their functional requirements to perform their work. Software Quality is defined as the conformance to explicitly state functional and performance requirements, explicitly documented development standards, and implicit characteristics that are expected of all professionally developed software (Roger & David, 2009). Quality in an organization is deemed as an excellence and conformity to specifications and meeting customer's expectations (Reeves & Bednar, 1994). Information Systems (IS) can be best understood using the framework of quality designed by Reeves & Bednar (1994) as the usage of state of the art technology together with "best practice" software and hardware standards to deliver an effective customer oriented service and performance (Reeves & Bednar, 1994). The significance of IS can be comprehended by convalescing profit limitations for the organization to provide a user-friendly and valuable application. IS quality is known as a

conformance to certain requirements to design systems that match the end users' information needs and adhere to business standards (Reeves & Bednar, 1994; Gorla, Somers, & Wong, 2010). Offering an attractive, user friendly service or product and entertaining user needs for changes and satisfying them of their expectations towards IS quality in turn allows them to be at ease to perform work efficiently (Gorla, Somers, & Wong, 2010).

Amplified dependence of employees on information systems (IS) drives management interest to improving information systems' quality (ISQ). A recent study by Gorla, N. et. al (2010) demonstrated that ''Improve IT quality" is one of the top issues facing ICT employees. While Information Systems Quality (ISQ) is a multidimensional measure, it is imperative to establish what phase of IT quality is significant for organizations to help the higher management authorities to devise efficient IS quality enhancement strategies (Gorla, Somers, & Wong, 2010).Although many theoretical frameworks have been used to measure technology usage & satisfaction, relatively few have been developed to investigate the link between the information systems quality (ISQ) and its effect on work life balance (WLB). Integrated solutions could help employees balance work-family life conflicts to a great extend (Madsen, 2003). Based on the review of current and previous literatures (Mahatanankoon, 2010; Barker J., 1993; Boswell & Julie, 2007), there is a blurred boundary between work and life as a result of technological control.

These theorists suggest that technological dependence is evident because the employees in the cloud computing industry rely heavily on gadgets and applications to perform their daily operations. Technological advances have made it possible for work to be performed from almost anywhere (Kinnunen, Mauno, Geurts, & Dikkers, 2005). Managing the integration of work and family demands is a critical challenge facing most employees & an issue of growing importance in management literature (Kossek, Noe, & DeMarr, 1999; Scholarios & Marks, 2004). Ergonomic quality is expected to have a strong impact on the information system effectiveness, which can be defined as the degree to which the information system meets its intended purpose (Poels & Cherfi, 2006). In this context, it was deemed necessary to consider Ergonomic Quality (EQ) as, it is found to be very much linked with psychological and physical aspects of human computer interaction (Wilson, J. R, 2000; Korunka & Hoonakker, 2014).

Ergonomics has become a trend because of the demand from employees who crave for more human comfort when working. Ergonomically designed, user friendly devices and working environment may play a role in balancing an employee's work and life as it may preserve a healthy workforce, in turn achieving a higher staff productivity and turnover (Wells, 2010). Stress has been defined in various different ways over the years, where initially stress was deemed to be pressure from the environment (Michie, 2002). The current definition of stress relates to the interaction between an individual and the situation revolving around work and family commitments (Michie, 2002). However, based on Wells (2010) and Harrington et. al. (2004) the rapid growth of technology usage and gadgets which allow working from a remote location have raised several social issues with regards to employees' awareness of a safe usage of tools and equipments (Harrington & Walker, 2004; Wells, 2010). Therefore, ergonomics play an evident role in ensuring the safety and wellbeing of the employee. Safety and wellbeing is important to ensure a more productive workforce (Harrington & Walker, 2004). Teleworking relies heavily on the usage of information technology gadgets and telecommunication tools to reduce work related travel, therefore it is essential to have a good ergonomically designed gadget and information systems that reduces the strain on the employee whilst working. However, a good information system with an acceptable ergonomic design aspects may reduce stress and maintain a healthy wellbeing and a good quality of life among employees working on a 24/7 operations in the ICT industry.

A suitable ergonomic design is essential to avoid repetitive strain injuries. These strain injuries can extend over time and be able to lead to a long-term disability. Thus, there is a need to examine the ergonomic quality and its significance towards achieving a good work life balance (WLB) to employees working from a remote location (Adenekan, 2000). Ergonomically designed, user friendly devices and working environment may play a role in balancing an employee's work and life as it may preserve a healthy workforce, in turn achieving a higher staff productivity and turnover (Wells, 2010; Wilson, J.R, 2014). Stress has been defined in various different ways over the years, where initially stress was deemed to be pressure from the environment (Michie, 2002). The current definition of stress relates to the interaction between an individual and the situation revolving around work and family commitments (Michie, 2002). Thus, ergonomics has become a trend because of the demand from employees who crave for ergonomically designed gadgets to aid mobility in performing their work from various geographical locations (Sinclair, M. A., 2007).

Work life balance (WLB) is defined as "satisfaction and good functioning at work and at home with minimum role – conflict" (Clark, 2000; Sturges & Guest, 2004). Work life balance is "the absence of unacceptable levels of conflict between work and non-work demands" (Greenblatt, 2002). Susi (2011) argues that there is no single definition for WLB, thus WLB is viewed in a broad sense as the ability for an employee to have a well-balanced time between work and other commitments (Susi & Jawaharrani, 2011). The researcher agrees that WLB policies and procedures plays an important role in achieving employee engagement and in turn reduces turnover. There are other factors such as workplace culture, job enrichment / satisfaction, work- role-fit and many other behavioural and psychological factors which play an evident role on WLB. There are many benefits to the employer such as reduced absenteeism, reduced employee stress, better job satisfaction among workers and retention of valuable workforce. These factors lead to a better work environment, however, they are only tested among Indian, Australian and New Zealand employees. Issues pertaining to job satisfaction, work culture and the role of these in ensuring a well balanced life and work among cloud workers have yet to be explored in Malaysian ICT industry (Susi & Jawaharrani, 2011). The use of progressive human resource practices generated an assurance to work which in turn risks the creation of work to be relatively too attractive (Rajadhyaksha & Smita, 2004). Building on Kossek's previous work illustrates care giving responsibility as one of the determinants of work – life balance (Kossek, Colquitt, & Noe, 2001).

A recent survey conducted by a global management consulting firm, shows 70% of employees prefer work-life balance over money when choosing a job (Fuad, 2013).Various studies that examined work and non-work conflict, non-work roles, fatigue, stress, burnout, psychological well-being, depressed moods and physical symptoms to be contributing factors to an unbalanced work life were examined (Cameron, Rebecca, & David, 2007). Poor ISQ may lead to the inability to perform work as required within a stipulated duration and may lead to psychological and physical problems. This area will be tested in the study as it has been found under explored. Literature agrees that poor WLB had been associated with negative health and fatigue (Cropley & Millward, 2009). In context with the study on WLB issues among managers in the garment industry in India, it was found that there was a need for the organizations to develop positive WLB initiatives to prevent poor health among their workers (Thulasimani, Duraisamy, & Rathinasabapathi, 2010). Limited empirical studies have been done to show the impact of information system quality on work life balance especially in terms of using DeLone and McLean's IS Success model constructs as a means of testing against employees' work life balance specifically amongst ICT workers in Malaysia. A methodical literature review was performed and lead to exploring the key areas of concern in the research area which lead to the derivation of:-

- the role of the ergonomic quality of the technical gadgets used (EQ) in enabling employees to work away from the office thus, achieving work life balance.
- the impact of Work Life Balance (WLB) on Employee Performance (EP).

Since DeLone and McLean (1992) developed the IS success model, many researchers have either attempted to modify, extend and test the model in various industries to gain insights on prevailing IS quality issues. Organizations have increased their spending on Information Technology and communication since 2008 (Kanaracus, 2008), thus the need to improve IT services and support. Vis-à-vis there is numerous outsource companies beginning to mushroom to meet the current need to provide remote support services. The study aims to test the role of ergonomic quality against work life balance and whether this has significance to better employee performance. Figure 1, illustrates the conceptual model derived based on a systematic literature reviewed and found that the ergonomic quality of technological gadgets used by Malaysian ICT employees may have some impact on employee work life balance and employee performance.

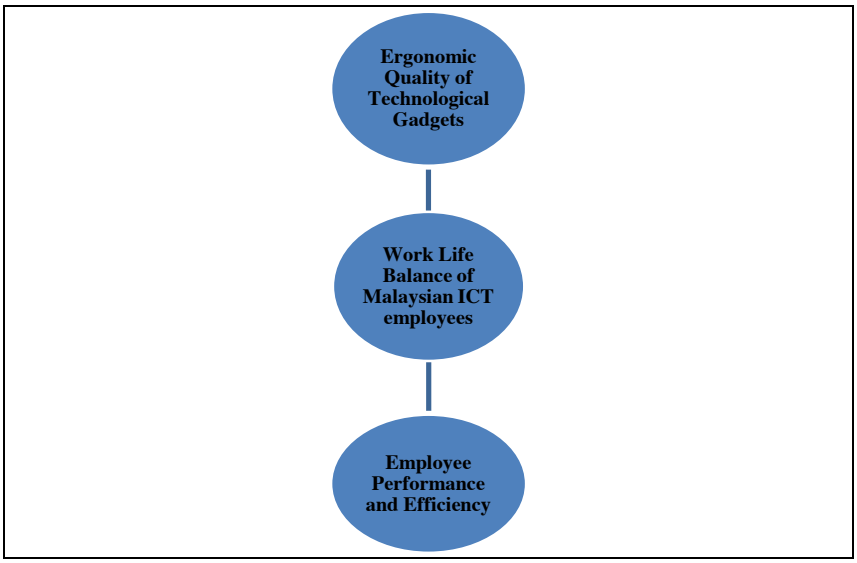

Figure 1: Conceptual Framework

The results suggest that adoption of a good functional information system may be a potential initiative in an IS perspective to reduce the problems and issues on how employees juggle to balance work and other personal commitments from a remote work environment. The study serves to answer how current working methods change when the system is in the cloud and how information systems resources could be properly utilized to reduce stress that jeopardizes the work life balance of the employee. It seeks to find a possible solution on how the ergonomic quality can be maintained to ease the usage amongst the employees working remotely in a 24/7 operations. It also looks at a possible extension to the body of knowledge as there were limited prior studies done on the impact of ergonomic quality on work life balance. The findings of this study will be helpful to ICT companies, Multimedia Development Corporation (MDeC) and society at large. In line with SME Cloud Computing Adoption Programme, which is an incentive program by Multimedia Development Corporation and towards achieving Digital Malaysia, the study contributes to one of the NKRA's (NATIONAL KEY RESULT AREAS) strategic goals of creating a more sustainable work-life harmony amongst employees in Malaysia. The outcome of the research will enable fostering new tools and technologies that are driven by health and safety dimensions to allow more remote work. The findings can be used to formulate recommendations to the ICT sector on issues pertaining to sustainable development/policy formulation in relation to maintaining a healthy workforce with good work life balance. This research will empower people in the ICT sector to work remotely, thus addressing pressing issues such as traffic congestion, social-family co-evolution.

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